

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No. 10/617,822
Atty Docket No.: Q71182

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1. (currently amended): A magnetic recording medium having a nonmagnetic substrate on which is provided at least a soft magnetic under-film, an orientation control film that controls an orientation of a film directly above, a perpendicular magnetic recording film having an axis of easy magnetization oriented to be mainly perpendicular to the substrate, and a protective film, wherein the orientation control film has a material composition forming a C11_b structure and is a CuHf, CuTi, CuZr, GeW, GeMo, SiMo, SiW, SiRe, ZnHf or ZnTi alloy.

Claim 2. (canceled).

Claim 3. (previously presented): The magnetic recording medium according to claim 1, wherein the orientation control film is a CuHf, CuTi, or CuZr alloy.

Claim 4. (canceled).

Claim 5. (previously presented): The magnetic recording medium according to claim 1, wherein the orientation control film is a GeW or GeMo alloy.

Claim 6. (canceled).

Claim 7. (previously presented): The magnetic recording medium according to claim 1, wherein the orientation control film is a SiMo, SiW, or SiRe alloy.

Claim 8. (canceled).

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Claim 9. (previously presented): The magnetic recording medium according to claim 1, wherein the orientation control film is a ZnHf or ZnTi alloy.

Claims 10 to 12. (canceled).

Claim 13. (previously presented): The magnetic recording medium according to claim 1, wherein the orientation control film has a thickness of not less than 0.5 nm and not more than 20 nm.

Claim 14. (canceled).

Claim 15. (previously presented): The magnetic recording medium according to claim 1, wherein the perpendicular magnetic recording film is formed of a material that includes at least Cr and Pt.

Claim 16. (canceled).

Claim 17. (previously presented): A method of manufacturing the magnetic recording medium according to claim 1, comprising carrying out, in order, at least a step of forming a soft magnetic under-film on a nonmagnetic substrate, a step of forming an orientation control film that controls an orientation of a film directly above, a step of forming a perpendicular magnetic recording film having an axis of easy magnetization oriented to be mainly perpendicular to the substrate, and a step of forming a protective film.

Claim 18. (canceled).

Claim 19. (original): A magnetic recording and reproduction apparatus comprising the magnetic recording media according to claim 1 and a magnetic head that records and reproduces

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Application No. 10/617,822
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information on the magnetic recording medium, wherein the magnetic head is a magnetic
monopole head.

Claim 20. (canceled).